



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/534,380 | 01/17/2006 | Norbert Kroth | 1454.1613 | 4983 |
| 21171 7590 04/15/2008 STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005 | | | | |
| EXAMINER | | | | |
| VU, MICHAEL T | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 2617 | | | | |
| MAIL DATE | | DELIVERY MODE | | |
| 04/15/2008 | | PAPER | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/534,380

Applicant(s)

KROTH ET AL.

Examiner

MICHAEL T. VU

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-36 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 17-20 and 26-36 is/are rejected.
- 7) ☒ Claim(s) 21--25 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-850)
- Paper No(s)/Mail Date 02/01/08, 12/05/07, 05/09/05

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: ____
- 5) ☐ Notice of Inventor's Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 02/01/2008, 12/05/2007, and 5/09/2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Objections

3. Claims 30-32 are objected to because of the following informalities: "claim 30, the method **according to claim 30**, wherein the probability...."

Furthermore, claims 31-32 are depending on claim 30.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 17-20, 26-29, 33-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Agarwal (US 6,075,779).

Regarding claim 17, Agarwal teaches a method for controlling uplink access transmissions in a radio communication system (Abstract), comprising: determining a random delay time for user equipment to transmit a signal on an uplink access channel based upon a probability distribution that increases in density with increasing delay (Col. 2, lines 7-35), the random delay time being determined by the user equipment (Col. 5, lines 30-33, also see Col. 6, lines 57 to Col. 7, line 8).

Regarding claim 18, Agarwal teaches the method according to claim 17, wherein the delay time is determined upon receipt of a request for uplink access transmissions from a base station (Col. 5, lines 4-5).

Regarding claim 19, Agarwal teaches the method according to claim 18, wherein the base station transmits the request on a paging channel or on a control channel (Col. 2, lines 56-67).

Regarding claim 20, Agarwal teaches the method according to claim 17, wherein the signal for which the delay time is determined is a response signal transmitted by the user equipment on a contention based common uplink access channel (Col. Lines 23-35, Col. 5, lines 30-33, also see Col. 6, lines 57 to Col. 7, line 8)

Regarding claim 26, Agarwal teaches the method according to claim 17, wherein a base station associated with a communication network issues a request (Col5, lines 1-29), after the delay time, the user equipment performs an uplink access transmission as a response to the request (Col. 2, lines 7-35, also see Col. 4 to Col. 4,

line 40), the network determines if the number of user equipments responding to the request exceeds a predetermined threshold (time interval/exceeded a maximum, Col. 6, lines 7-67), and the network signals to the user equipments to terminate further uplink access transmissions if the threshold is exceeded (Col. 6, lines 7-67 to Col. 7, line 8).

Regarding claim 27, Agarwal teaches the method according to claim 26, wherein to signal the user equipments to terminate further uplink transmissions (Col. 6, lines 1-56), the network transmits a dedicated termination signal to the user equipments, or signals an allocation of resources that implicitly indicates termination is required (Col. 6, lines 7-67 to Col. 7, line 8).

Regarding claim 28, Agarwal teaches the method according to claim 26, wherein dependent on the number of user equipments responding to the request, the network either assigns common resources for at least a plurality of the user equipments or assigns individual resources for each user equipment (Col. 6, lines 7-67 to Col. 7, line 8).

Regarding claim 29, Agarwal teaches the method according to claim 19, wherein the signal for which the delay time is determined is a response signal transmitted by the user equipment on a contention based common uplink access channel (Col. 2, lines 7-35).

Regarding claim 33, Agarwal teaches a method for controlling uplink access transmissions in a radio communication system (Abstract), comprising: using downlink signalling from a base station of the radio communication system to transmit time variable information to user equipments located in an area covered by the base station

(Col. 1-28, Col. 4, lines 37-63), using the time variable information to determine delay times for transmitting signals on an uplink access channel from the user equipments (Col. 5, lines 1-28), the time variable information varying based upon a probability distribution which increases in density with increasing time (Col. 2, lines 7-35, by distributing the BSM acknowledgment transmissions over time, and interval of time, see Col. 3, lines 2-25).

Regarding claim 34, Agarwal teaches the method according to claim 33, wherein the user equipments each perform a comparison of a randomly determined number with the time variable information (Col. 6, lines 1-56), and based on the result of the comparison (Col. 2, lines 7-35, Col. 4, lines 37-67), each user equipment controls the transmission of said signals on the uplink access channel (Col. 4, lines 37-67).

Regarding claim 35, Agarwal teaches a base station of a radio communication system (Col. 5, lines 1-28), comprising: a transmitter to transmit a time variable information in downlink to user equipments located in an area covered by the base station (Col. 4, lines 37-63), wherein the information is used in the user equipments to determine delay times for transmitting signals on an uplink access channel and wherein the information varies based upon a probability distribution which increases in density with increasing time (Col. 2, lines 7-35, by distributing the BSM acknowledgment transmissions over time, and interval of time, see Col. 3, lines 2-25); and a receiver to receive the signals transmitted by the user equipments on the uplink access channel (Col. 5, lines 28-57, Col. 6, lines 7-56, see forward and reverse channels).

Regarding claim 36, Agarwal teaches a user equipment of a radio communication system (Mobile Phone, Col. 2, lines 7-35), comprising a calculation unit to determine a delay time for transmitting a signal on an uplink access channel (Col. 2, lines 7-35, Col. 4, lines 37-63, Col. 5, lines 29-40, and also see Col. Col. 6, lines 57-67), wherein the delay time is randomly determined based upon a probability distribution that increases in density with increasing delay (Col. 2, lines 7-35, by distributing the BSM acknowledgment transmissions over time, and interval of time, see Col. 3, lines 2-25).

Allowable Subject Matter

6. Claims 21-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

For claim 21, the method according to claim 17, wherein the probability distribution is determined according to: $p(t)=x \cdot e^{Xt}/(e^{XT}-1)$ for $t \in [0, T]$ wherein $p(t)$ denotes a probability that a delay time t is selected, T denotes a predetermined maximum delay time, and x is a parameter that controls a rate of change of probability with time.

For claim 22, the method according to 17, wherein the probability distribution is determined according to: $p(j)=q^n - j \cdot q^{n-j} (1-q)^j$ for $j \in [0, n]$ wherein n is the number of

sub-intervals in a predetermined time interval T , $P(j)$ denotes a probability that sub-interval j is selected, and q is a parameter that controls a rate of change of probability within a sub-interval.

For claim 23, the method according to claim 17, wherein the probability distribution is determined according to: $P(j) = (q^n - j - q^n) / (1 - q^n)$ for $j \in [1, n]$ wherein n is the number of sub-intervals in a predetermined time interval T ; $P(j)$ denotes a probability that sub-interval j is selected, and q is a parameter that controls a rate of change of probability within a sub-interval.

For claim 24, the method according to claim 21, wherein T and x are signaled to the user equipment.

For claim 25, the method according to claim 24, wherein T and x are transmitted together with a request for the delay time from the base station.

(Please see the original equations in the claims 21-25)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL T. VU whose telephone number is (571)272-8131. The examiner can normally be reached on 8:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles N. Appiah can be reached on 571-272-7904. The fax phone

Art Unit: 2617

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Vu/
Examiner
AU-2617

/Charles N. Appiah/
Supervisory Patent Examiner, Art Unit 2617